

I: Delaware Nursing Home Utilization Reports

II: Nursing Home Bed Projections

III: HRMP Revision Update



Part I: Delaware Nursing Home Utilization Reports

■ Two Reports for Review and Approval

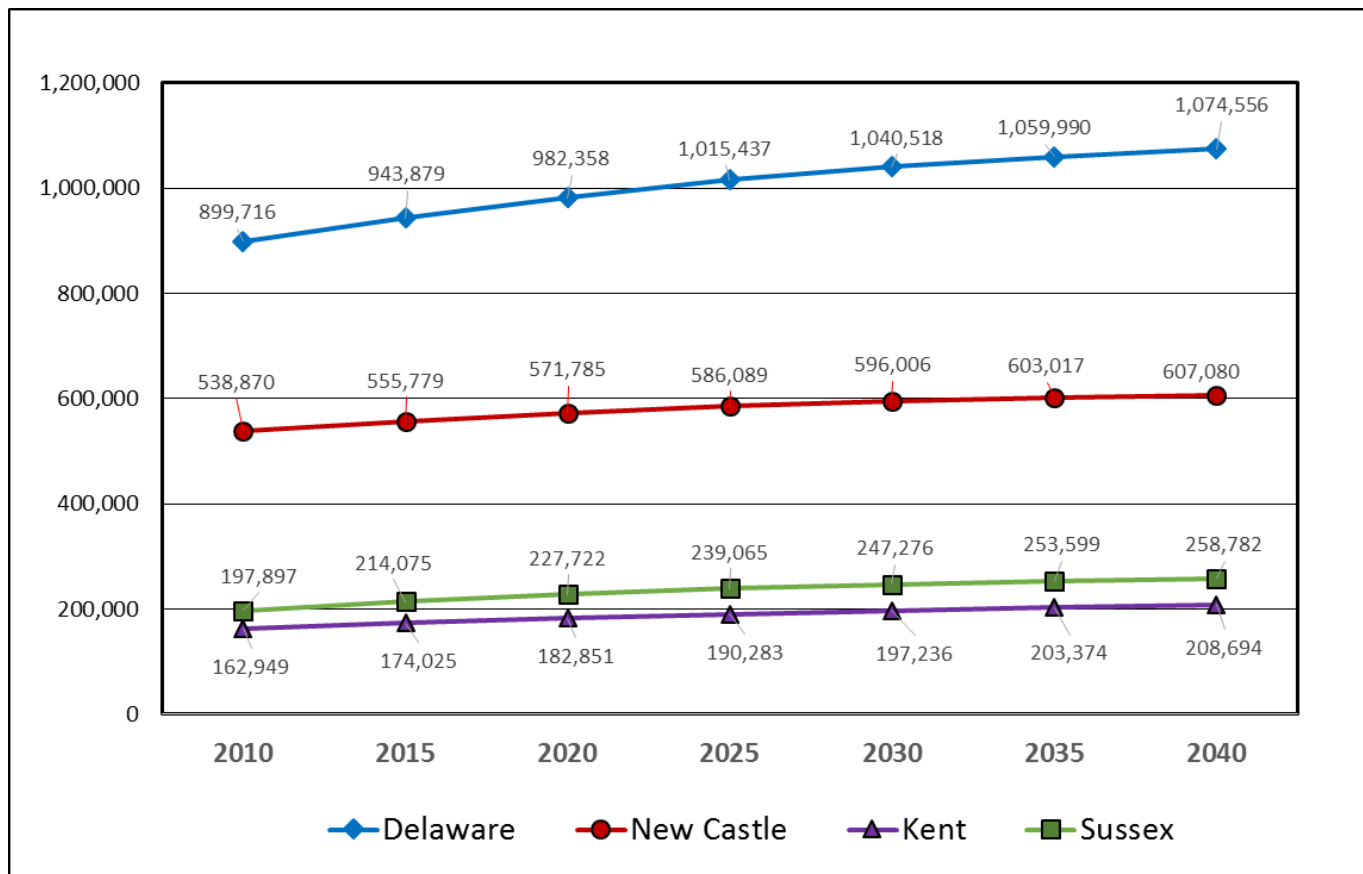
1. Data Year 2014

2. Data Year 2015

■ 2016 data currently being submitted by Delaware nursing homes

■ Anticipated completion data for 2016 Report = Spring 2017

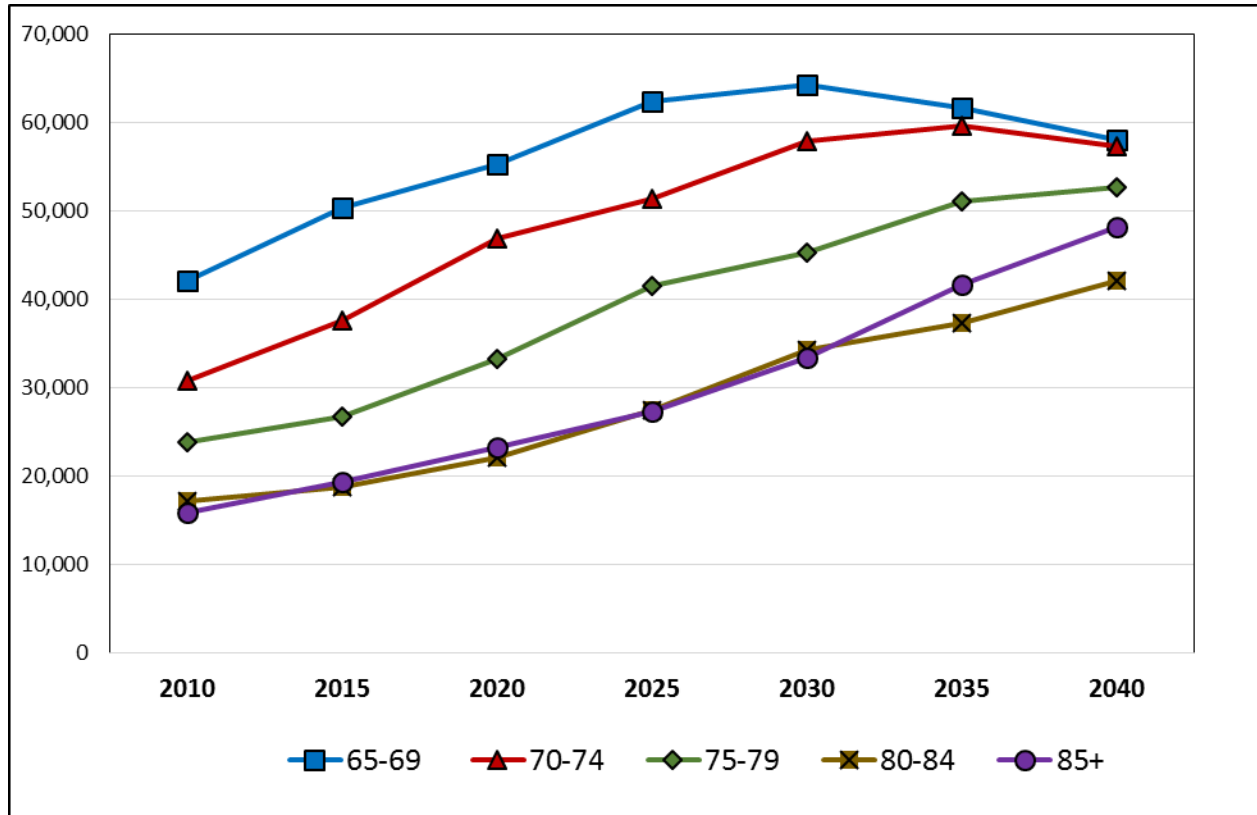
OVERALL Population Growth in Delaware



	2010	2015	2020	2025	2030	2035	2040	2010-2040 Percentage Increase
Delaware	899,716	943,879	982,358	1,015,437	1,040,518	1,059,990	1,074,556	19.4%
New Castle	538,870	555,779	571,785	586,089	596,006	603,017	607,080	12.7%
Kent	162,949	174,025	182,851	190,283	197,236	203,374	208,694	28.1%
Sussex	197,897	214,075	227,722	239,065	247,276	253,599	258,782	30.8%

Source: Annual Population Projections, Delaware Population Consortium, Version 2014.0, October 2014

65+ Population Growth in Delaware



	2010	2015	2020	2025	2030	2035	2040	2010-2040 Percentage Increase
65-69	42,159	50,470	55,351	62,498	64,372	61,697	58,154	37.9%
70-74	30,883	37,658	46,957	51,371	57,914	59,739	57,303	85.5%
75-79	23,930	26,811	33,300	41,551	45,308	51,115	52,796	120.6%
80-84	17,269	18,822	22,059	27,472	34,253	37,296	42,097	143.8%
85+	15,893	19,355	23,240	27,412	33,429	41,639	48,190	203.2%

65+ Population Growth in Delaware

DELAWARE		2010	2015	2020	2025	2030	2035	2040	2010-40 % Increase
	65-69	42,159	50,470	55,351	62,498	64,372	61,697	58,154	37.9%
	70-74	30,883	37,658	46,957	51,371	57,914	59,739	57,303	85.5%
	75-79	23,930	26,811	33,300	41,551	45,308	51,115	52,796	120.6%
	80-84	17,269	18,822	22,059	27,472	34,253	37,296	42,097	143.8%
	85+	15,893	19,355	23,240	27,412	33,429	41,639	48,190	203.2%
NEW CASTLE		2010	2015	2020	2025	2030	2035	2040	2010-40 % Increase
	65-69	20,780	26,803	30,791	35,109	35,882	33,814	31,181	50.1%
	70-74	14,945	18,391	24,307	28,000	31,964	32,820	31,039	107.7%
	75-79	12,108	13,079	15,918	21,110	24,332	27,867	28,712	137.1%
	80-84	9,452	9,525	10,528	12,880	17,114	19,780	22,690	140.1%
	85+	9,270	10,939	12,045	13,244	15,598	20,028	24,393	163.1%
KENT		2010	2015	2020	2025	2030	2035	2040	2010-40 % Increase
	65-69	7,320	6,708	7,658	9,126	9,905	11,284	11,851	61.9%
	70-74	5,510	5,593	6,163	7,002	8,356	9,062	10,326	87.4%
	75-79	4,235	4,220	4,849	5,350	6,088	7,262	7,877	86.0%
	80-84	2,681	2,938	3,382	3,864	4,296	4,892	5,843	117.9%
	85+	2,432	2,497	3,239	3,891	4,518	5,147	5,912	143.1%
SUSSEX		2010	2015	2020	2025	2030	2035	2040	2010-40 % Increase
	65-69	14,059	16,959	16,902	18,263	18,585	16,599	15,122	7.6%
	70-74	10,428	13,674	16,487	16,369	17,594	17,857	15,938	52.8%
	75-79	7,587	9,512	12,533	15,091	14,888	15,986	16,207	113.6%
	80-84	5,136	6,359	8,149	10,728	12,843	12,624	13,564	164.1%
	85+	4,191	5,919	7,956	10,277	13,313	16,464	17,885	326.7%



Delaware Nursing Homes (as of 2015)

- **47 total facilities**

- 44 private
- **3** public

- **New Castle County:**

- 27 private facilities
- 2 public facilities (**EPBH**, GBHC)

- **Sussex County:**

- 11 private facilities

- **Kent County:**

- 6 private facilities
- 1 public facility (DHCI)

Delaware Nursing Home Licensed Bed Counts

Year	Private Facilities								Public Facilities		All Facilities	
	New Castle		Kent		Sussex		Total Private					
	Homes	Beds	Homes	Beds	Homes	Beds	Homes	Beds	Homes	Beds	Homes	Beds
2005	27	2,516	5	521	10	1,133	42	4,170	4	652	46	4,822
2006	26	2,427	5	530	10	1,144	41	4,101	4	655	45	4,756
2007	27	2,523	6	642	10	1,143	43	4,308	4	626	47	4,934
2008	26	2,498	6	642	12	1,323	44	4,463	4	626	48	5,089
2009	26	2,519	6	642	11	1,234	43	4,395	4	626	47	5,021
2010	26	2,519	6	642	11	1,234	43	4,395	3	591	46	4,986
2011	26	2,519	6	642	11	1,234	43	4,395	3	591	46	4,986
2012	27	2,569	6	672	11	1,264	44	4,505	3	576	47	5,081
2013	27	2,649	6	672	11	1,264	44	4,585	3	522	47	5,107
2014	27	2,649	6	672	11	1,264	44	4,585	3	375	47	4,960
2015	27	2,646	6	672	11	1,264	44	4,582	3	312	47	4,894
2005-2015 % Change		5.2%		29.0%		11.6%		9.9%		-52.1%		1.5%



Measure of Utilization:

BILLABLE PATIENT DAYS

- Billable Patient Day: a unit of time (i.e., one day) during which the facility's services are used by one patient.
- For example, if a nursing home has 100 patients on a particular day, the facility has generated 100 billable patient days for that particular 24-hour period.
- Billable patient days tell us about broad utilization, but don't provide insight into more detailed patterns of use
 - **Scenario A:** 50 patients stay 20 days each → **1,000 billable days / month**
 - **Scenario B:** 500 patients stay 2 days each → **1,000 billable days / month**

Measure of Utilization:

BILLABLE PATIENT DAYS

- If a facility's number of billable patient days increases from one time period to the next, it is an indication that the facility is
 - a. Caring for more patients
 - b. Caring for patients for longer periods of time, or
 - c. A **combination** of these two factors.

Delaware Nursing Home Billable Patient Days

Year	Private Facilities				Public Facilities	All Facilities
	New Castle	Kent	Sussex	Total Private		
2005	800,955	176,226	367,391	1,344,572	135,622	1,480,194
2006	809,733	175,027	373,221	1,357,981	144,357	1,502,338
2007	830,921	179,315	371,520	1,381,756	142,893	1,524,649
2008	833,344	208,235	387,715	1,429,294	143,640	1,572,934
2009	824,262	219,019	404,234	1,447,515	137,584	1,585,099
2010	838,037	218,593	402,188	1,458,818	137,824	1,596,642
2011	829,974	219,302	398,550	1,447,826	131,675	1,579,501
2012	843,039	219,558	403,842	1,466,439	114,177	1,580,616
2013	860,924	218,651	404,942	1,484,517	98,108	1,582,625
2014	871,456	224,370	419,167	1,514,993	87,792	1,602,785
2015	867,015	226,841	412,646	1,506,502	76,993	1,583,495
2005-2015 % Change	8.2%	28.7%	12.3%	12.0%	-43.2%	7.0%

Historical trends in billable patient day data mirrors increases / decreases in licensed bed counts.

Occupancy Rates

- The proportion of nursing home beds in use during the course of a 12-month period

- Calculation Steps:
 1. Obtain total number **actually-used** billable patient days (for the year) for each facility
 2. Multiply each facility's average annual bed count by 365 to obtain the total number **possible** billable patient days for each facility
 3. Divide: $\text{Occupancy Rate} = (\text{number } \underline{\text{actually-used}} \text{ BPD}) / (\text{number } \underline{\text{possible}} \text{ BPD})$

- In Delaware, occupancy rates for private facilities ranged from **71.8% - 97.7%**
 - Median: 90.3%

Delaware Nursing Home Occupancy Rates

Year	Private Facilities				Public Facilities	All Facilities
	New Castle	Kent	Sussex	Total Private		
2005	87.2%	92.7%	88.8%	88.3%	57.0%	84.1%
2006	91.4%	90.5%	89.4%	90.7%	60.4%	86.5%
2007	90.2%	76.5%	89.1%	87.9%	62.5%	84.7%
2008	91.4%	88.9%	80.3%	87.7%	62.9%	84.7%
2009	89.6%	93.5%	89.7%	90.2%	60.2%	86.5%
2010	91.1%	93.3%	89.3%	90.9%	63.9%	87.7%
2011	90.3%	93.6%	88.5%	90.3%	61.0%	86.8%
2012	91.1%	89.5%	87.5%	89.8%	54.3%	85.8%
2013	89.0%	89.1%	87.8%	88.7%	51.5%	84.9%
2014	90.1%	91.5%	90.9%	90.5%	64.1%	88.5%
2015	89.8%	92.5%	89.4%	90.1%	67.7%	88.7%
2005-2015 % Change	2.6%	-0.2%	-0.4%	1.8%	10.7%	4.6%

2013 U.S. Avg. NH Occupancy Rate: 82.2%

(<http://www.cdc.gov/nchs/data/hus/hus13.pdf#110>; Table 110)

Delaware Nursing Home Admissions

Year	Private Facilities				Public Facilities	All Facilities
	New Castle	Kent	Sussex	Total Private		
2005	5,442	618	2,001	8,061	68	8,129
2006	5,652	870	2,250	8,772	145	8,917
2007	5,358	755	2,246	8,359	156	8,515
2008	5,709	954	2,279	8,942	113	9,055
2009	5,835	1,066	3,242	10,143	126	10,269
2010	5,928	1,164	3,088	10,180	90	10,270
2011	6,406	1,353	3,247	11,006	119	11,125
2012	6,654	1,493	3,563	11,710	65	11,775
2013	6,566	1,696	3,477	11,739	31	11,770
2014	6,816	1,726	3,983	12,525	50	12,575
2015	6,544	1,612	3,672	11,828	64	11,892
2005-2015 % Change	15.8%	85.3%	63.2%	34.8%	-55.9%	33.4%

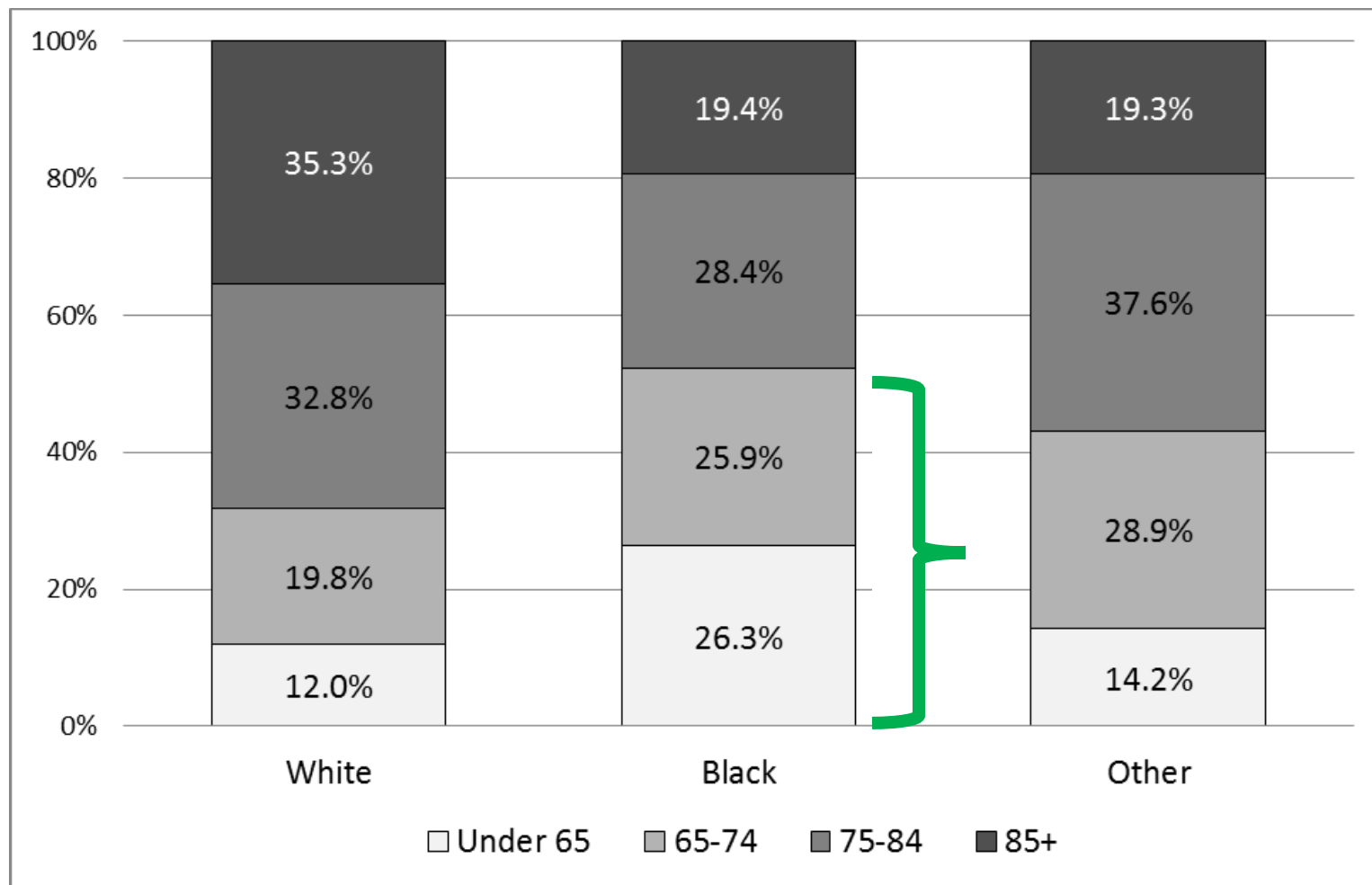
Delaware Nursing Home Admissions, by Race and Age, 2015

	Age Groups				
	Under 65	65-74	75-84	85+	Total Admissions (by Race)
White (N=9,572)	12.0%	19.8%	32.8%	35.5%	80.5%
Black (N=2,123)	26.3%	25.9%	28.4%	19.4%	17.9%
Other (N=197)	14.2%	28.9%	37.6%	19.3%	1.7%
Total (by Age) (N=11,892)	14.6%	21.0%	32.1%	32.2%	100.0%



- White patients represented 80% of all DE NH admissions 2015
- Age is positively correlated with proportion of admissions
- Discharge trends mirror admission trends

Delaware Nursing Home Admissions, by Race and Age, 2015



Delaware Nursing Home Admissions, by Destination, 2015

	Discharge Destination						
Facility Type	Home	Hospital	Assisted Living	Private LTCF	State Owned LTCF	Death	Other
Private (N=11,429)	59.9%	21.7%	3.2%	2.5%	0.6%	10.8%	1.3%
Public (N=97)	4.1%	5.2%	0.0%	17.5%	40.2%	32.0%	1.0%
All facilities (N=11,526)	59.9%	21.5%	3.2%	2.6%	0.9%	11.0%	1.3%

How Has the Private Nursing Home Care Changed In Delaware?

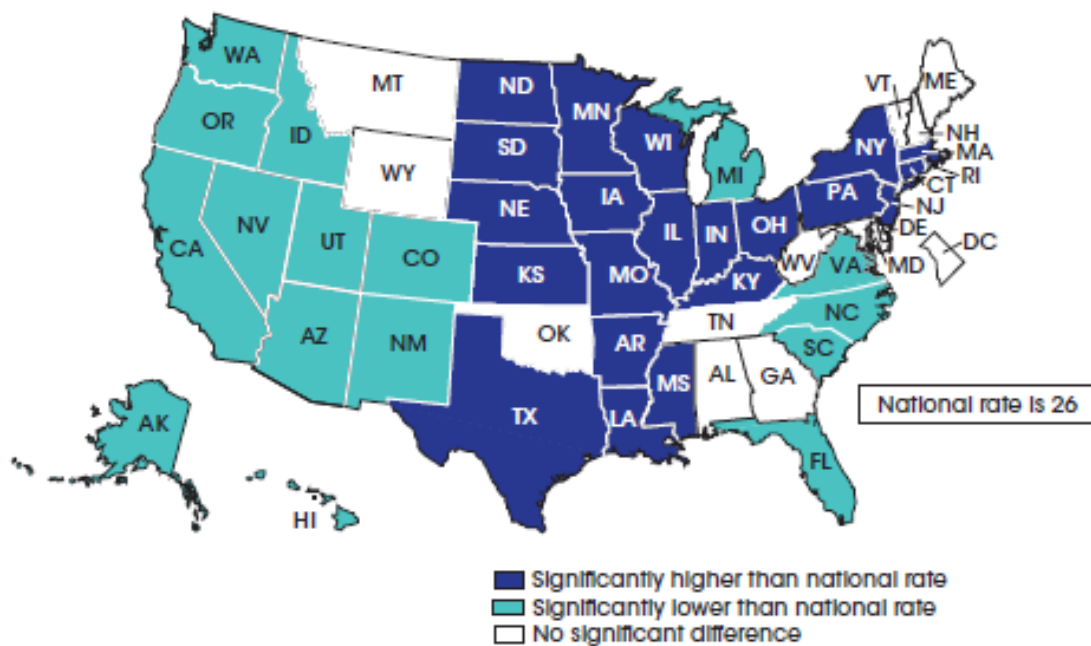
2005 – 2015 Percentage Difference in Utilization Measures

	New Castle (private)	Kent (private)	Sussex (private)	Total Private
Bed Count	5.2%	29.0%	11.6%	9.9%
Billable Pt Days	8.2%	28.7%	12.3%	12.0%
Admissions	15.8%	85.3%	63.2%	34.8%
Discharges	12.6%	100.0%	60.4%	33.2%
Occupancy	2.6%	-0.2%	-0.4%	1.8%

- Admissions/discharges increased at a higher rate than would be expected by bed expansion alone
- Private NH facilities caring for more patients for shorter periods of time
- Consistent with national trends: NH shift toward a higher percentage of shorter-stay rehab care

U.S. Rate: 26.05 per 1,000 persons age 65+
Range: 7.01 per 1,000 (AK) – 49.22 per 1,000 (ND)
Delaware Rate: 22.97 per 1,000 (*not significantly different from US*)

Figure 16. Nursing home residents aged 65 and over: United States, 2012



NOTES: Rates based on nursing home residents per 1,000 persons aged 65 and over on any given day. Significance tested at $p < 0.05$.

SOURCES: CDC/NCHS, National Study of Long-Term Care Providers and Table 5 in Appendix B.

Delaware's NH utilization rate among the 65+ population is not significantly different from the US as a whole. However, Delaware's 65+ population is proportionately larger than many other states.



Part II: Delaware Nursing Home Bed Projections

■ Two Sets of NH Bed Projections for Review and Approval

1. **2015 – 2020** (based on report from Data Year 2014)
2. **2016 – 2021** (based on report from Data Year 2015)



Part II: Delaware Nursing Home Bed Projections

■ Revised NH Bed Projection Methodology: A Brief Recap

- The “old” projection methods created skewed bed projections, especially for Kent County
 - Previously, all 150 DVH beds considered private Kent County beds
 - Projected bed need artificially low for Kent County

- Revised methodology developed via HRB Sub-Committee (March 2014)
- Additional feedback from HRB Members at March 2016 Retreat
- “Test-Driven” twice (2015-2020 and 2016-2021 projections)



Part II: Delaware Nursing Home Bed Projections

1. **Obtain annual billable patient day data (by state and county)**
 - a. For public facilities, allocate proportion of billable patient days to each county according to admission patterns
 - i. Example: if 37% of admissions to DHCI are from NCC, 37% of the billable patient days generated by DHCI are appropriated to NCC)

- ii. Proportion of Billable Patient Days Attributable to Each County: 2014 and 2015

	2014 Data <i>(2015-2020 Projections)</i>	2015 Data <i>(2016-2021 Projections)</i>
New Castle	39.8%	44.1%
Kent	25.7%	21.3%
Sussex	32.7%	34.6%

- b. DVH considered a public facility for projection purposes only



Part II: Delaware Nursing Home Bed Projections

2. **Calculate projected population growth factors by age group (by state and county)**
 - a. Most-recently available Delaware Population Consortium Data
 - b. Population growth factors calculated for the most immediate 5-year projection period (i.e., 2015-2020 or 2016-2021)

3. **Calculate the proportion of NH admissions by age group (<65, 65-74, 75-84, and 85+) and use these proportions to calculate a weighted sum of population growth factors**



Part II: Delaware Nursing Home Bed Projections

4. **Multiply weighted population growth factor by current year billable patient days to obtain projected billable patient days for the last year of the projection period (i.e., for 2020 or 2021)**
5. **Divide projected billable patient days by 365 to obtain projected bed need**
6. **Calculate the difference in current and projected bed need to obtain the projected shortage / surplus of NH beds (by state and county)**

2015 – 2020 Delaware Nursing Home Bed Projections

Delaware			
	Current Beds	Projected Bed Need	Shortage / Surplus
2015-2016	4,960	5,043	-83
2015-2017	4,960	5,203	-243
2015-2018	4,960	5,369	-409
2015-2019	4,960	5,548	-588
2015-2020	4,960	5,709	-749
Kent			
	Current Beds	Projected Bed Need	Shortage / Surplus
2015-2016	657	654	3
2015-2017	657	675	-18
2015-2018	657	699	-42
2015-2019	657	720	-63
2015-2020	657	743	-86
New Castle			
	Current Beds	Projected Bed Need	Shortage / Surplus
2015-2016	2,858	2,862	-4
2015-2017	2,858	2,935	-77
2015-2018	2,858	3,010	-152
2015-2019	2,858	3,096	-238
2015-2020	2,858	3,170	-312
Sussex			
	Current Beds	Projected Bed Need	Shortage / Surplus
2015-2016	1,436	1,474	-38
2015-2017	1,436	1,537	-101
2015-2018	1,436	1,602	-166
2015-2019	1,436	1,672	-236
2015-2020	1,436	1,735	-299

2016 – 2021 Delaware Nursing Home Bed Projections

Delaware			
	Current Beds	Projected Bed Need	Shortage / Surplus
2016-2017	4,894	4,967	-73
2016-2018	4,894	5,124	-230
2016-2019	4,894	5,293	-399
2016-2020	4,894	5,445	-551
2016-2021	4,894	5,619	-725
Kent			
	Current Beds	Projected Bed Need	Shortage / Surplus
2016-2017	620	643	-23
2016-2018	620	666	-46
2016-2019	620	685	-65
2016-2020	620	707	-87
2016-2021	620	730	-110
New Castle			
	Current Beds	Projected Bed Need	Shortage / Surplus
2016-2017	2,850	2,876	-26
2016-2018	2,850	2,947	-97
2016-2019	2,850	3,030	-180
2016-2020	2,850	3,100	-250
2016-2021	2,850	3,180	-330
Sussex			
	Current Beds	Projected Bed Need	Shortage / Surplus
2016-2017	1,424	1,445	-21
2016-2018	1,424	1,506	-82
2016-2019	1,424	1,571	-147
2016-2020	1,424	1,629	-205
2016-2021	1,424	1,700	-276

Delaware Nursing Home Bed Projections

2015 - 2020

2016 - 2021

Delaware				Delaware			
	Current Beds	Projected Bed Need	Shortage / Surplus		Current Beds	Projected Bed Need	Shortage / Surplus
2015-2020	4,960	5,709	-749	2016-2021	4,894	5,619	-725
Kent				Kent			
	Current Beds	Projected Bed Need	Shortage / Surplus		Current Beds	Projected Bed Need	Shortage / Surplus
2015-2020	657	743	-86	2016-2021	620	730	-110
New Castle				New Castle			
	Current Beds	Projected Bed Need	Shortage / Surplus		Current Beds	Projected Bed Need	Shortage / Surplus
2015-2020	2,858	3,170	-312	2016-2021	2,850	3,180	-330
Sussex				Sussex			
	Current Beds	Projected Bed Need	Shortage / Surplus		Current Beds	Projected Bed Need	Shortage / Surplus
2015-2020	1,436	1,735	-299	2016-2021	1,424	1,700	-276

Bed need projections does not reflect beds
approved but not operational.



NH Bed Projections: Summary Points

- ❑ Both sets of projections (2015-2020 and 2016-2021) predict shortages in NH beds that increase over time
- ❑ Predicted bed shortages, by absolute numbers, are greatest in New Castle and Sussex Counties
- ❑ When considered in the context of beds missing per 1,000 persons age 65+, in 2021:
 - ❑ **New Castle County:** **0.57** beds short per 1,000 persons age 65+
 - ❑ **Kent County:** **0.60** beds short per 1,000 persons age 65+
 - ❑ **Sussex County:** **1.20** beds short per 1,000 persons age 65+



Part III: HRMP Revision Update

■ Previous Presentations / Feedback from Committee Members

- a. December 2015
- b. January 2016
- c. March 2016 (HRMP Retreat)

■ Current Version: 8



Part III: HRMP Revision Update

■ Version 8: Major Highlights

- a. Greatly expanded Charity Care section
- b. Revised NH Bed Projection methods section per sub-committee recs
- c. Removed Comprehensive Rehab and Behavioral Health sections (*phase II edit*)
- d. Removed the Enforcement section (*phase II edit*)
- e. Incorporated all written comments from HRB members
- f. Expanded the Major Medical Equipment section to incorporate additional information from HRB website that was not previously included in the HRMP
- g. Expanded the New Medical Technology section to incorporate additional relevant details for the applicant to address
- h. Included page-limit guidelines in the Document Property section



Part III: HRMP Revision Update

The Path Forward:

- **July 28, 2016:** Regulatory Flexibility Analysis/Impact Statement forms will be sent to the Registrar of Regulations office for review/publishing on the **September 1st** (deadline for submission is 15th of prior month). Attachments to include:
 - Old HRMP (strike through) and HRMP v8; and
 - Public notice.
- **September 1, 2016-** Registrar of Regulations office will publish the HRMP and public notice. There will be a **30 day comment** on Registrar of Regulations website. This will also be posted to the HRB website. Process to coincide with the HRB Title 16 requirements.
- **September 19, 2016-** Public hearing will be held at 1:00 PM at the Delaware Technical Community College Terry Campus Corporate Training Center, Rooms, 400A and B 100 Campus Drive, Dover, DE. (Transcripts will be made available)
- **Written Comments-** Accepted through October 3, 2016.

END